Running Head: DoD PHARMACY EXECUTIVE LEADERSHIP SKILLS

Vision 2010: Pharmacy Executive Leadership Skills and Associated Competencies in the Department of Defense

Andrew B. Meadows, Pharm.D., BCPS, CHE

U.S. Army-Baylor University Graduate

Program in Healthcare Administration

Report Documentation Page

Form Approved
OMB No. 0704-0188

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED
JAN 2002	**Final**	**Jul 2001 - Jul 2002**

4. TITLE AND SUBTITLE
Vision 2010: Pharmacy Executive Leadership Skills and Associated Competencies in the Department of Defense

5a. CONTRACT NUMBER
5b. GRANT NUMBER
5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Capt Andrew B. Meadows, USAF

5d. PROJECT NUMBER
5e. TASK NUMBER
5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
TRICARE Southwest 7800 IH-10, Suite 400 San Antionio, TX 78230

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
US Army Medical Department Center and School Bldg 2841 MCCS-HRA (US Army-Baylor Program in HCA) 3151 Scott Road, Suite 1412 Fort Sam Houston, TX 78234-6135

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
35-02

12. DISTRIBUTION/AVAILABILITY STATEMENT
Approved for public release, distribution unlimited

13. SUPPLEMENTARY NOTES

14. ABSTRACT
The purpose of this study was to identify the issues that senior Department of Defense(DoD) pharmacy officers will face in the future, as well as the skills, knowledge, and abilities (SKAs) required to perform at the senior executive level. The study employed two iterations of the Delphi method for executive decision-making separated by an expert panel content analysis. Ninety-three DoD pharmacists serving in the pay grades of O-5, O-6, or selected for promotion to those grades, were selected as participants in this study. During the first phase, participants identified five major issues that are believed to be of greatest importance to pharmacy leaders.Respondents then reported specific SKAs that might be needed to deal with those issues. The first phase of the Delphi had a response rate of 44.1 percent and generated 62 unique issues facing pharmacy executives. An expert panel of the three most senior pharmacy executives in each military branch was convened to review and sort the issues from phase one into a set of meaningful domain categories, as well as to select an appropriate title for each domain. A total of eight domain categories were created: human resources, pharmacy operations/business practices, information management and technology, financial resources, formulary management, drug therapy management, pharmacy benefit management, and leadership. During the Delphis second phase, respondents provided ratings using a 7-point relative importance-rating scale for the SKA items within each of the domains based on which competencies the respondent felt thata future DoD pharmacy executive should possess. The response rate for phase two of the Delphi was 46.2 percent. During this phase, 73.33 percent of the top 15 rated SKA items came from the drug therapy management, leadership, and formulary management domains. Results indicate that the issues facing future pharmacy executives will require them to expand their clinical abilities as well as their ability to collaborate and communicate with other professionals.

15. SUBJECT TERMS
Delphi, leadership, pharmacy, competency

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**UU**	**51**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

Acknowledgements

I wish to express my deepest gratitude to the members of the expert panel, COL Mike Heath, Col Ardis Meier, and CAPT Pat Welter. Without a doubt, this project would not have come to fruition without their expertise, advice, and tireless support. I personally benefited tremendously from working closely with these three individuals throughout the course of this endeavor. The vision and leadership that they contribute to DoD Pharmacy on a daily basis is truly remarkable.

Additionally, I would like to thank the men and women of the military pharmacy community for participating in this effort. Collectively, this group of people sets the standard for excellence in the profession and all pharmacists, military and civilian will benefit greatly from the insight that they have provided. I consider myself very fortunate to serve along side them.

Finally, the instruction, mentoring, and guidance provided by my friend and colleague Dr. Kenn Finstuen was absolutely invaluable during the course of this project. His excitement and dedication to the art and science of research are infectious – I look forward to working on other projects with him in the future.

Abstract

The purpose of this study was to identify the issues that senior Department of Defense (DoD) pharmacy officers will face in the future, as well as the skills, knowledge, and abilities (SKAs) required to perform at the senior executive level. The study employed two iterations of the Delphi method for executive decision-making separated by an expert panel content analysis. Ninety-three DoD pharmacists serving in the pay grades of O-5, O-6, or selected for promotion to those grades, were selected as participants in this study. During the first phase, participants identified five major issues that are believed to be of greatest importance to pharmacy leaders. Respondents then reported specific SKAs that might be needed to deal with those issues. The first phase of the Delphi had a response rate of 44.1 percent and generated 62 unique issues facing pharmacy executives. An expert panel of the three most senior pharmacy executives in each military branch was convened to review and sort the issues from phase one into a set of meaningful domain categories, as well as to select an appropriate title for each domain. A total of eight domain categories were created: human resources, pharmacy operations/business practices, information management and technology, financial resources, formulary management, drug therapy management, pharmacy benefit management, and leadership. During the Delphi's second phase, respondents provided ratings using a 7-point relative importance-rating scale for the SKA items within each of the domains based on which competencies the respondent felt that a future DoD pharmacy executive should possess. The response rate for phase two of the Delphi was 46.2 percent. During this phase, 73.33 percent of the top 15 rated SKA items came from the drug therapy management, leadership, and formulary management domains. Results indicate that the issues facing future pharmacy executives will require them to expand their clinical abilities as well as their ability to collaborate and communicate with other professionals.

Table of Contents

List of Appendices

List of Tables

Introduction

Pharmaceuticals are a key treatment modality used in the delivery of healthcare that are sure to be employed even more in the future. Advances in medical technology allow for certain conditions that used to require invasive procedures and extended hospital stays to be treated on an outpatient basis with pharmaceutical products. This trend will likely expand in the future with the maturation of biotechnology and the understanding of the human genome.

The increasing role of pharmaceuticals in patient care is challenging members of the pharmacy profession like never before. A survey of the pharmacy professional literature over the past 12 months is insightful as to the major issues the profession is facing. Clearly, the most pressing issue is the tremendous shortage of licensed pharmacists. In fact, the pharmacist shortage is the single greatest imbalance of professional staff supply and demand, on a percentage basis, in the healthcare industry today (Bureau of Health Professions (BHP), 2000). Other challenges that are frequently cited in the literature include medication errors, information technology, rising pharmaceutical expenditures, and major clinical advances. The ability of both current and future pharmacy executives to successfully negotiate the challenges that lie ahead will surely define the direction of both their respective organizations and the profession in aggregate.

Pharmacy in the Department of Defense (DoD) is facing similar challenges to those seen by the profession as a whole. The DoD is relying on its cadre of pharmacy executives in this difficult time and fully expects them to be successful in fulfilling the organization's mission. The mission of the DoD pharmacy is to provide cost-effective, high quality pharmaceutical service and leadership in support of the readiness and managed care objectives of the military health care system. Continuing, the vision is to promote optimal health outcomes through

pharmaceutical services characterized by readiness, uniformity, innovation, technology, skills, and leadership (Ogden & Heath, 2001). It is important to note that both the mission and vision for the DoD pharmacy program include the word leadership, which underscores the unprecedented need for effective leadership within DoD pharmacy's ranks.

At no other time in the history of DoD pharmacy have there been challenges that are as numerous or as complex as those being faced today. As an example, a more uniform pharmacy benefit structure for all beneficiaries is needed to support the DoD's readiness and managed care missions, as well as to ensure safety, appropriateness, and cost-effectiveness. Additionally, the military is at a competitive disadvantage in the current pharmacist workforce market compared to private sector employers that offer sign-on bonuses and lucrative salaries. It is hoped that recent legislative approval of special compensation will help the DoD be more competitive in the pharmacy labor marketplace. Finally, the DoD is incorporating automated dispensing technologies as part of a coordinated effort to improve efficiency and eliminate medication errors (Ogden & Heath, 2001). Clearly, the issues that face senior pharmacy officers today are tremendous and their ability to effectively and efficiently manage these challenges will significantly impact the organization's ability to accomplish its mission.

Although all pharmacy officers are expected to exert leadership within their organizations, those currently providing leadership across the enterprise serve in the more senior ranks. Given the challenges that DoD pharmacy faces, it is imperative that future leaders, specifically those currently serving in more junior ranks, are intensively mentored in order for them to develop the competencies needed to be successful when they reach enterprise-wide leadership positions. In addition to being receptive to mentoring from superiors, junior officers

need to embark on an intense regimen of self-improvement and lifelong learning in order to be prepared for the trials to come.

This analysis contributes to the body of literature in pharmacy management by directly addressing several aspects of pharmacy executive competence. First, this study identifies specific competencies which current and aspiring pharmacy leaders should possess in order to enhance the probability of their success in positions of responsibility. Additionally, skills, knowledge, and abilities (SKAs) required to support achievement of those competencies will also be identified. Competencies are defined as managerial capabilities and core job responsibilities. Skills address technical expertise, knowledge refers to the possession of facts and principles, while abilities incorporate physical, mental, or legal power (Hudak, 2000).

Literature Review

Despite the fact that pharmacists comprise the third largest health profession (BHP, 2000), empiric studies of pharmacists' executive skills and competencies are notably absent from the literature. However, a recent presentation by a distinguished pharmacy leader from the private sector sheds some light on the perceptions of those in executive positions. In his John Webb Visiting Professor lecture at the Bouve College of Pharmacy, Paul Abramowitz, Pharm.D., identified several issues that he believes will challenge pharmacy leaders in the coming years. At the top of that list is the current shortage of pharmacists. In addition, he believes that information technology will play an increasing role in the profession through decision-making systems, information exchange systems, and drug distribution automation technology. The changing focus of the pharmacy profession from pharmaceutical products to direct patient care will continue to influence the decisions of future executives. Finally, Dr. Abramowitz believes

that continued competition between healthcare providers and healthcare systems will dramatically alter the healthcare landscape (Abramowitz, 2001).

In contrast to the pharmacy profession, there is a significant body of research documenting the competencies required by executives in other healthcare fields. The vast majority of the literature is focused on the administrator executive, in both the federal and private sectors. Additionally, several studies have been conducted of clinical professionals such as physicians, nurses, and dentists. The literature review is grouped into four distinct sections: federal sector administrator executives, private sector administrator executives, federal sector clinician executives, and private sector clinician executives.

Federal sector administrator executives.

In 1994, Army medical treatment facility (MTF) commanders and deputy commanders for administration were part of a Delphi study by Hudak, Brooke, and Finstuen. The 37 subjects were asked to provide their unique insight on the SKAs required by MTF leaders in the future. After the first round, the respondents had identified 187 SKAs that were grouped into nine domains by an expert panel. Domains with the greatest number of SKAs were cost/finance, health care delivery, accessibility, quality/risk management, technology, and professional staff. During the second round, subjects ranked the most important SKAs. The six highest rated SKAs were listening skills/communication, human relations, understanding managed care contracts, mentoring, strategic thinking, and ability to measure productivity. The study shows that future MTF commanders will require competence in a broad array of leadership and management skills.

Sentell and Finstuen (1998) studied 87 Naval hospital executives using the Delphi method. Respondents identified the SKAs required for successful healthcare management in the 21st century. In the first round, 106 issues and 302 corresponding SKAs were generated using an

open-ended questioning method. An expert panel later analyzed and grouped the responses into nine domains. Leadership, healthcare delivery, cost/finance, technology and accessibility were the domains with the most identified issues. People skills, team-building, personal responsibility, innovation, and communication skills were the top rated SKAs. The leadership domain had four of the top five SKAs. As a whole, the results emphasized the importance of human resource management skills for future Navy healthcare executives.

Rodgers, Finstuen, Manglesdorff, and Snyder (1999) conducted a Delphi study of commanders and healthcare administrators in the Coast Guard. The 147 participants were asked to identify the five most important issues facing Coast Guard healthcare administrators as well as the SKAs required to deal with the issues. They were later asked to rate the combined list of issues and SKAs in terms of their importance. The top five domains with the most SKAs generated in the first round were managed care, cost/finance, personnel, technology, and leadership. The five most important SKAs were written communication, listening, oral communication, care of active duty personnel, and budgeting. The top three SKAs were in the leadership domain. Overall, Coast Guard healthcare leaders can be sure that leadership skills are currently, and will likely remain, highly relevant.

In a Delphi study by Manglsdorff, et al. (1997), 173 senior Army Medical Service Corps officers were asked to determine the behaviors needed by young officers in order to achieve a successful military career in the 21st century. Senior officers generated a total of 41 important behaviors during the open-ended questioning as part of the first round of the study. During the second round of the study, respondents rated the 41 behaviors using a 7-point relative importance scale. Top-rated behaviors were integrity, moral courage, responsibility, accountability, and competence.

Private sector administrator executives.

Hudak, Brooke, Finstuen, and Riley (1993) performed a research study using the Delphi method to determine the most significant SKAs for healthcare administrators in the year 2000. The 50 respondents were senior hospital administrators as well as being Fellows of the American College of Healthcare Executives. The authors arranged the healthcare issues into nine domains. The most frequently cited domains were cost/finance, leadership, professional staff, health care delivery, and accessibility. The second round of the study requested that each respondent rate the SKAs to determine relative importance. Skills rated highest by the respondents included listening/communication, leadership/management, strategic thinking, understanding physicians, conflict management/team-building, human relations, and ability to lead a board. Four of the top six competencies were in relations with the professional staff. The results suggest not only that successful healthcare administrators need to be business focused, but that a human relations focus is important as well.

In 1997, Hudak, Brooke, Finstuen, and Trounson conducted another Delphi study of healthcare administrators affiliated with ambulatory clinics. The sample of 320 American College of Medical Practice Executives Fellows was asked to identify competency items needed to succeed over the next five years. After the first round, responses were classified into six management domains. The domains in order of decreasing frequency were leadership/strategic management, relationship management, resource management, functional management, stakeholder management, and patient care management. SKAs were rated for importance during the study's second round. The ability to listen and respond, ability to build trust, ability to adapt to change, speaking and writing, ability to work with different types of individuals, and ability to

exercise moral courage were the highest rated SKAs. The relationship management domain had five of the top ten SKAs and the leadership domain had four of the top ten SKAs.

Federal sector clinician executives.

Duperroir and Finstuen (1995) conducted a Delphi study that included 196 federal-sector nurse executives. Round one identified 201critical issues and their associated SKAs. Issues and SKAs were analyzed and ranked into ten domains. Domains with the greatest number of SKAs were leadership, managed care, business, and staffing/personnel. Round two showed that the most important SKAs were diplomacy/tact, working with multi-disciplinary teams, speaking/writing, case management, and networking. Three of the top ten SKAs were in the leadership domain. The results indicate that future nurse executives must be visionary, competent in strategic management, capable of multi-disciplinary action, and knowledgeable in financial, quantitative, and communicative skills.

Another Delphi study (Wineman, Manglesdorff, & Finstuen, 1998), asked 123 senior Army Dental Corps officers about their beliefs concerning the attitudes and behaviors required of successful future leaders in the Army Dental Corps. During the first phase of the study, participants were asked to choose five attitudes and behaviors from a list of 15 that was provided. They were also asked to provide an additional five that the participant thought should be included. There were 92 total attitudes and behaviors identified from this process. The second phase asked the respondents to rate the attitudes and behaviors on a relative importance scale. The top five rated attitudes and behaviors were honesty, integrity, accountability, dedication, and compassion. For future Army Dental Corps officers to reach leadership positions in the opinion of these respondents, they must exhibit a strong sense of values and professional ethics.

In 2001, Peters, Dominguez, and Finstuen studied 67 senior leaders in the Navy Dental Corps in order to determine the critical issues and SKAs in dental healthcare administration. The participants identified 77 unique issues that were later divided into seven domains by a neutral panel of dental healthcare experts. The three most important domains, listed in decreasing order, were: personnel management, leadership issues, and dental healthcare management. During the second phase of the study, respondents rated SKA items on their importance. The top five SKAs, listed in decreasing order, were: mission accomplishment, communication skills, ability to prove value, maintaining high standards, and team building. Similar to many of the other executive studies, the importance of personnel management and leadership issues was clearly demonstrated.

Private sector clinician executives.

Brooke, Hudak, Finstuen, and Trounson (1998) conducted a Delphi study to determine the most important competencies for success in the next five years as perceived by physician executives who were also members of the American College of Medical Practice Executives. Respondents were asked to identify five competencies as well as the specific SKA required to achieve the associated competency. From these responses, competencies were grouped into 13 management domains by an expert panel. When the domains were ranked according to the number of competencies in each domain, the five with the greatest number were managing health care resources to create value, business and finance, leadership and management, strategic planning, and communication/interpersonal skills. When the second iteration of the study asked participants to rank SKAs for overall importance, SKAs in the leadership and management domain were clearly regarded as the most important. This domain had the single highest ranked

SKA, as well as six of the top 10 SKAs. Medical practice physicians require a large array of competencies to include managing clinical quality as well as business and finance issues.

Purpose

Given the rate and magnitude of change in military pharmacy practice, there is a clear need to delineate the skills required for successful performance as a senior DoD pharmacy officer. The purpose of this study was to develop a consensus among senior DoD pharmacy officers about the SKAs required to perform at the senior executive level. This Delphi study is the first empirical assessment of future DoD pharmacy executive issues; it will attempt to add additional insight into the growing body of executive skills literature.

Methods

Senior pharmacy executives in the DoD were chosen as study respondents based on their demonstrated expertise in managing complex organizations. Those officers currently serving in the grades of Lieutenant Colonel/Commander (O-5) and Colonel/Captain (O-6), as well the officers selected for promotion to those grades were deemed the best sources for estimating future pharmacy leaders' job issues and requirements. Pharmacy officers who have attained the aforementioned ranks have distinguished records of excellence in DoD pharmacy as evidenced by their selection by competitive promotion boards. Not only do these individuals have records of excellence, they have performed at extremely high levels for extended periods of time. To serve in the lowest grade that was selected for inclusion in this study requires a minimum of ten years of service in DoD pharmacy, and likely significantly more. Based on both expertise and tenure, the respondents are clearly deserving of the designation as a DoD pharmacy executive.

The research method for this study consisted of two iterations of the Delphi method for executive decision-making separated by an expert panel content analysis. The Delphi method

developed by the RAND Corporation (Helmer, 1967; Brown, Cochran, & Dalkey, 1969; Dalkey, 1969; Delbecq, Van de Ven, & Gustafson, 1975) has been used in a variety of healthcare settings to establish priorities and predict future trends (Anderson, 1984, 1987, 1991). In the first round of this Delphi study, participants were asked to identify five major issues that are believed to be of greatest importance to pharmacy leaders in the next five to ten years. Respondents were also asked to articulate specific SKAs that might be needed by future leaders in order to successfully deal with those issues. The Delphi method uses an open-ended questioning format in the first round. In order to hasten the response time for this study, electronic mail was used for all communication with respondents to include instrument delivery. From the responses received in the first round via electronic mail, major issues and SKAs were entered into a word processing document. Key phrases were designated for the main theme or content of each pharmacy executive issue. The frequency of response to the key phrases for each of the issues was later summed. Key phrases underwent an initial sorting by the investigator into similar groups or domains in order to give the expert panel a starting point from which to begin their efforts.

For ethical reasons, the anonymity of respondents is absolutely essential. Anonymity was ensured at all points during the research process by isolating respondents' electronic responses and cutting/pasting them into a single word processing document. Names, addresses, and branch of service were not retained in any way, only the pure responses. The original electronic message response was subsequently deleted in order to leave no record of individual participation. An environment of non-attribution was essential to the viability of this study.

An expert panel of three senior pharmacy executives who serve as their respective military branch's pharmacy consultant to the Surgeon General and are members of the DoD Pharmacy Board of Directors was convened. This panel reviewed every issue generated during

the first round of the Delphi and sorted the issues into a set of meaningful domain categories. After all sorting activities were complete; the panel selected an appropriate title for each domain. Though several issues could have been sorted into more than one domain, the panel was requested to place each item into the domain that represents the single most appropriate category for that issue. These domains were then rank-ordered by the reported frequencies of issues.

Results of the first round and expert panel process were provided as feedback to the executive respondents during the second Delphi iteration. The second round consisted of a structured questionnaire, developed from SKAs within the identified domains, as defined by the expert panel. The intent of collecting SKAs was to form a pool of job requirement items for each domain. No attempt was made to purify the data or to standardize item statements. This capture of pharmacy “job language" is thought to provide respondents with the most accurate representation of the thinking of their peers. During the Delphi method’s second round of decision-making, respondents were asked to provide relative importance ratings for the SKA items within each of the domains based on which competencies the respondent felt that a future DoD pharmacy executive should possess. The 7-point relative importance rating scale was anchored at the extremes with 1 = extremely unimportant to 7 = extremely important. Background and demographic data including age, gender, branch of service, duty title, job experience, and education were also collected during the second iteration. Rating reliabilities and descriptive statistics were computed for each of the SKA items.

Any research based on measurement must be concerned with reliability. To establish the extent to which the same results would be obtained from another study sample, internal consistency inter-rater reliability was tested using Cronbach’s coefficient alpha. Reliability

measures determine if the average values computed for SKAs within specific domains are stable and if they are highly agreed upon by pharmacy executives.

Content validity was addressed in this study by the use of an expert panel consisting of the three military branches' pharmacy consultant to the Surgeon General. The expert panel classified pharmacy issues into domains that they deem appropriate based on their vast experience and expertise. The three members of the expert panel did not serve as respondents during either round of the study. Construct validity was achieved through the utilization of data gathering methods, techniques, and analysis that have been successfully employed in other published studies.

Results

Delphi Phase One - Issues

In the first phase of the Delphi, 41 of 93 participants responded for a response rate of 44.1 percent. This response rate was considered adequate based on the previous literature (Richie, 1979). From the responses, 203 total issues were named, which, after combining like issues, resulted in 62 unique issues facing pharmacy executives. The investigator then conducted a preliminary grouping of the issue items into 12 categories in order to provide the expert panel with a starting point.

Content Analysis of Issues – Domains

Using the preliminary sorting, a three member expert panel was convened in order to definitively sort the collected issues into a meaningful collection of domain categories. The expert panel consisted of the three senior pharmacy executives in each military branch that serve as their branch's pharmacy consultant to the Surgeon General and are members of the DoD Pharmacy Board of Directors. These individuals represent the leader of their respective service's

pharmacy career field. This panel reviewed all 203 issues generated during phase one of the Delphi and sorted the issues into a total of eight domain categories. Upon completion of this task, the panel selected an appropriate title for each domain. Domain names chosen by the panelists are as follows: (1) human resources, (2) pharmacy operations/business practices, (3) information management and technology, (4) financial resources, (5) formulary management, (6) drug therapy management, (7) pharmacy benefit management, and (8) leadership. Domains were then rank-ordered by the reported frequencies of unique issues as shown in Table 1.

Delphi Phase Two – SKA Ratings

In the second phase of the Delphi, 43 of 93 participants responded for a response rate of 46.2 percent, which is considered acceptable (Richie, 1979). Demographic and background data were collected only during the second round of the Delphi. Table 2 shows a summary of respondent demographic data. The average age of the pharmacy executives was 46.30 years with a standard deviation of 3.91 years. Men made up 90.70 percent of respondents, while women composed 9.30 percent. Respondents have been working as pharmacists for an average of 21.42 years with a standard deviation of 4.18 years. The majority of the time spent in the profession for these subjects has been spent in the military, with the average length of service as a military pharmacist being 18.00 years with a standard deviation of 3.97 years. Air Force pharmacy executives made up 53.49 percent of responses, followed by Army and Navy respondents at 30.23 and 16.28 percent, respectively. The majority, 53.49 percent, of respondents were serving in duty positions as the Director of Pharmacy Services at a MTF. Another 25.58 percent of respondents were filling a variety of staff officer positions. Five respondents (11.63 percent) were acting as commanders MTF's at various levels. All five of these respondents were Air Force pharmacy executives, so this occurrence appears to be peculiar to the Air Force Medical

Service command structure. The final four respondents (9.30 percent) were serving in a variety of jobs that could not be classified in the three previous categories. All 43 respondents had obtained a Bachelor of Science degree in pharmacy and 18 executives (41.86 percent) reported obtaining a Doctor of Pharmacy degree. Masters degrees were very prevalent among the group with many pharmacy executives having received either a Master of Science in Pharmacy (16.28 percent) or a Masters in a non-pharmacy area of specialization (58.14 percent) such as a Master of Healthcare Administration (MHA) or Master of Business Administration (MBA). Three respondents (6.98 percent) had obtained a Doctor of Philosophy (PhD) in pharmacy and, finally, 11.63 percent of respondents had other formal education consisting primarily of residencies or fellowships.

SKA items were analyzed for the degree of overall agreement. Inter-rater reliability was determined by the use of Cronbach's coefficient alpha. The rating scale data were analyzed using the Statistical Package for the Social Sciences (SPSS) computer software. Reliability indices ranged from a high of 0.86 for the drug therapy management domain to a low of 0.71for the pharmacy operations / business practices and leadership domains. While all results are above the acceptable level of 0.70 (Nunnally, 1978), the relatively low result for the leadership domain is the result of a minimal number of SKA rating items (five) in that domain. Overall, these results indicate a high degree of internal consistency for SKA ratings and that average SKA rating values within specific domain categories were stable. Reliability results are summarized in Table 3.

Overall, SKA items were rated as being highly important. In total, 23 of the 80 total SKAs had average ratings above 6.0, while only two SKAs possessed average ratings below 4.0. On the 7-point rating scale used, average ratings ranged from 3.35 to 6.70. Table 4 shows the

top three rated SKA items in each domain. The highest rated SKA item in the eight domains ranged from a high of 6.70 for "Ability to see the big picture" in the leadership domain to a low of 6.07 for "Skills in using basic computer software (Word, Excel, etc.)" in the information management and technology domain.

Table 5 shows the top 15 rated SKAs overall. The single highest rated SKA, "Ability to see the big picture," along with three of the top 15 rated SKAs came from the leadership domain. The domain with the most of the highest rated SKAs was the drug therapy management domain, which accounted for five of the top 15. Also of note, an additional three of the top 15 rated SKAs came from the formulary management domain. So, a large majority (73.33 percent) of highly rated SKA items came from only three domains – drug therapy management, leadership, and formulary management.

The Table 6 displays the bottom ten rated SKAs in all domains. The lowest rated SKA was "Skills in computer programming" from the information management and technology domain with an average rating of 3.35. The domain with the greatest number of low ranking SKAs was the formulary management domain which contained three of the bottom ten rated SKAs. Compared to the top rated SKAs, the standard deviations of ratings for low rated SKAs were much higher. This finding suggests a greater level of variability or disagreement among respondents about the importance of these competencies.

Discussion

The issues facing pharmacy executives generated during phase one of the Delphi closely parallel those mentioned in the literature. Challenges such as recruiting and retaining pharmacist staff, automation, rising pharmaceutical expenditures, and creating a uniform pharmacy benefit were the most frequently reported issues by the respondents. This exactly parallels the recent

comments by the Chairman of the DoD Pharmacy Board of Directors in his statements of the major issues facing DoD pharmacy (Ogden & Heath 2001). It is also supported by other literature reports from the civilian sector.

It is interesting to note, however, that the leadership domain had the fewest number of issues as sorted by the expert panel. This is especially surprising given the fact that leadership is mentioned in both the mission and vision of the DoD pharmacy program. It was hypothesized that the reason for the low number of issues directly related to leadership is because it is interwoven into every issue for military pharmacy officers. This hypothesis is supported by the fact that during the second phase of the Delphi, SKAs from the leadership domain were rated very high, in fact, three of the top 15 SKAs were from that domain.

Another notable finding is the difference between the highest rated domains during phase one and phase two of the Delphi. During phase two, 73.33 percent of highly rated SKA items came from only three domains – drug therapy management, leadership, and formulary management. The domains were rated fifth, sixth and eighth, respectively, during phase one of the Delphi. Conversely, the top three domains during phase one (human resources, pharmacy operations/business practices, and information management and technology) only accounted for two of the top 15 rated SKAs, while they accounted for four of the bottom ten rated SKAs. A possible explanation of this occurrence is that most of the issues relating to the recruiting and retention of pharmacists, which dominated issues from the human resources domain, are managed at levels far higher in the command structure that pharmacy officers usually serve. For example, the recent approval of special compensation for pharmacy officers occurred at the congressional level, above the level of influence for most military pharmacists. This may also be the case for automation issues, which were most frequent from the information management and

technology domain, since the MTF commander, under advisement from the Director of Pharmacy Services, directly manages most of these large capital expenditures.

It is clear from the list of highly rated domains that pharmacy, even at the highest levels, remains a clinical profession. SKAs in both the drug therapy management and formulary management domains were rated very highly. These are two core areas for pharmacists at all levels, and while the specific competencies may become more global for senior pharmacy executives, proficiency in the clinical side of the profession remains important. This is an important finding given the changing educational background of military pharmacists. While 41.86 percent of respondents in this study possessed the more clinically focused Doctor of Pharmacy (PharmD) degree, an even greater percentage of pharmacy leaders in the next five to ten years will possess this degree given the change to the PharmD as the profession's entry level degree. Hopefully, future leaders will have even greater levels of competency in these clinically related areas and, thus, will be even better prepared to face the challenges that they will encounter.

Similar to other executive skills studies in the literature, people skills dominated the highest ranked competencies. The ability to relate, collaborate, and interact with staff members and other professionals, as well as skills in written and verbal communication, to include the ability to actively listen, were rated very highly. Additionally, skills in building a positive work environment and motivating staff members were rated quite high. This underscores the role of the traditional leadership and management functions for the successful pharmacy executive of the future. It is imperative that junior pharmacy officers obtain these competencies through academic preparation or experiential training since most undergraduate pharmacy education programs do not emphasize such skills.

The results of this study could potentially have a profound impact on the future of DoD pharmacy. Through this assessment of DoD pharmacy executive competencies, it will be relatively easy to integrate these results into the training and professional development of future DoD pharmacy leaders. Formal professional development of junior pharmacy officers, like that seen in the Air Force's Biomedical Officer Management Orientation and the Army's Officer Basic and Advanced Courses, may be modified to include instruction and training on many of the SKAs generated from this study. Additionally, continuing education programming at the annual DoD pharmacy conference may be targeted at some of the very same issues and SKAs. Finally, and most importantly, the mentoring of junior officers by those currently in executive positions will be enhanced through the documentation of critical competencies mentees should emulate and develop.

Shortcomings of this study include the response rate and the gender differences between current and future pharmacy executives. While the response rate is considered sufficient based on previous research, the input from slightly more that half of current DoD pharmacy executives was not captured. The insight of those non-responders is not likely to dramatically altered the results of this research if included, however, it would have been highly valuable to record their thoughts and possibly strengthen the study's findings.

Literature reports have documented the changing demographic of the pharmacy profession to one with more women than men. (BHP, 2000) The respondents of this study were more than 90 percent male, which is highly representative of the gender balance of pharmacy school graduates approximately 20 years ago. However, recent years' data have shown that women are now a clear majority of pharmacy school graduates (BHP, 2000). This trend of greater numbers of women in the profession is also reflected in the ranks of junior and mid-grade

pharmacy officers in the military today. The current difference of gender between junior and senior pharmacy officers in the military, negatively affects the ability to generalize the results of this study. It is possible that women's perceptions of executive issues and competencies could be significantly different than men's.

Though this research illuminates the competencies needed by future pharmacy executives, it does not identify current weaknesses and areas for improvement among junior pharmacy officers' skill sets. Additional research into the differing perceptions between junior and senior officers would be extremely valuable in order to better identify areas for intensive training and mentoring. Another valuable addition to the literature would be further research into the issues facing civilian pharmacy executives and the competencies that this group identifies as important. The similarities and differences of perceptions between the respondents in this study and their civilian counterparts would be very interesting.

Conclusion

This study identified the issues that current DoD pharmacy executives predict will be most likely to challenge leaders in the next five to ten years, and the SKAs that will be required to successfully manage these challenges. The issues that future pharmacy executives will face will require them to expand their competence to include a wide variety if skills. Competency areas such as drug therapy management, leadership, and formulary management will be at the forefront of the skills required in the future. In addition to developing their clinical abilities, future pharmacy executives must develop and expand their ability to collaborate and communicate with other professionals. By integrating the identified clinical and interpersonal skills, DoD pharmacy executives of the future will be better prepared to accomplish their critical mission well into the next century.

References

Abramowitz, P.W. (2001). Nurturing relationships: An essential ingredient of leadership. American Journal of Health-System Pharmacy, 58, 479-484.

Andersen, A. and Company, American College of Healthcare Executives. (1984). Health Care in the 1990s: Trends and Strategies. Ann Arbor, MI: Health Administration Press.

Andersen, A. and Company, American College of Healthcare Executives. (1987). The Future of Healthcare: Change and Choice. Ann Arbor, MI: Health Administration Press.

Andersen, A. and Company, American College of Healthcare Executives. (1991). The Future of Healthcare: Physician and Hospital Relationships. Ann Arbor, MI: Health Administration Press.

Brown, B., Cochran, S., & Dalkey, N. (1969). The Delphi Method II: Structure of Experiments (Report No. RM-5957-PR). Santa Monica, CA: RAND Corporation.

Bureau of Health Professions, Department of Health and Human Services. (2000). The pharmacist workforce: A study of the supply and demand for pharmacists (DHHS Publication No. BHP00090). Washington, DC: Government Printing Office.

Dalkey, N.C. (1969). The Delphi Method: An Experimental Study of Group Opinion (Report No. RM-5888-PR). Santa Monica, CA: RAND Corporation.

Delbecq, A.L., Van de Ven, A.H., & Gustafson, D.H. (1975). Group Techniques for Program Planning: A Guide to Nominal Group and Delphi Processes. Glenview, IL: Scott Foresman.

Duperrior, R.A., Finstuen, K. (April 1995). Envision 2000: Nurse executive competencies. Paper presented at Health Promotion: The Practical Side, Federal Nurses meeting, Las Vegas, Nevada.

Helmer, O. (1967). Analysis of the Future: The Delphi Method (Report No. P-3558). Santa Monica, CA: RAND Corporation.

Hudak, R.P., Brooke, P.P., Finstuen, K., & Riley, P. (1993). Health care administration in the year 2000: Practitioners' views of future issues and job requirements. Hospital & Health Services Administration, 38, 181-195.

Hudak, R.P., Brooke, P.P., & Finstuen, K. (1994). Forecast 2000: A prediction of skills, knowledge, and abilities required by senior medical treatment facility leaders into the 21st century. Military Medicine, 159, 494-500.

Hudak, R.P., Brooke, P.P., Finstuen, K., & Trounson, J. (1997). Management competencies for medical practice executives: Skills, knowledge, and abilities required for the future. Journal of Health Administration Education, 15, 218-239.

Hudak, R.P., Brooke, P.P., Finstuen, K., & Trounson, J. (1998). Management competencies required in ambulatory care settings. Physician Executive, 24, 32-38.

Hudak, R.P., Brooke, P.P., & Finstuen, K. (2000). Identifying management competencies for health care executives: review of a series of Delphi studies. Journal of Health Administration Education, 18, 213-243.

Mangelsdorff, A.D., Rodgers, J.R., Zucker, K.W., Thieschafer, C.L., Hagen, J.P., & Finstuen, K. (1996). Vision 21 Delphi Panel: Senior Army Medical Service Corps officers' vision of behaviors for success of future Medical Service Corps officers. Military Medicine, 162, 450-452.

Nunnally, J. C. (1978). Psychometric Theory (2nd ed.). New York: McGraw-Hill.

Ogden, J.E., & Heath, W.M. (2001). National Pharmacy Leadership Update. Federal Practitioner, 18 (Suppl. 10S-PH), 2-6.

Peters, A.D., Dominguez, D.G., & Finstuen, K. (2000). Vision 2005: A forecast of executive leadership skills and associated competencies required by Navy Dental Corps officers into the 20th century. Navy Medicine, 92 (4), 10-15.

Richie, N.J., Tagliareni, J., & Schmitt, J. (1979). Identifying health care administration competencies via a Delphi survey. Association of University Programs in Health Administration Program Notes, 82, 8-18.

Rogers, J.R., Finstuen, K., Manglesdorff, A.D., & Snyder, G.L. (1998). Executive competencies and skills required by United States Coast Guard health care administrators. AAMA Executive, Winter, 10-15.

Sentell, J.W., & Finstuen, K. (1998). Executive skills 21: A forecast of leadership skills and associated competencies required by Naval hospital administrators into the 21st century. Military Medicine, 163, 3-8.

Wineman, J.A., Mangelsdorff, A.D., & Finstuen, K. (1998). Senior executive behaviors for the Army dental care system of the 21st century. Military Medicine, 163, 377-380.

Worthen, D.B. (2001). Pharmacists in World War II: A brief overview with words and images from the Memories Project. Journal of the American Pharmaceutical Association, 41, 479-489.

Appendix A

30 July 2001

MEMORANDUM FOR DoD PHARMACY EXECUTIVES

FROM: Captain Andrew B. Meadows

SUBJECT: Vision 2010: Pharmacy Executive Leadership Skills – Initiation of Phase 1

1. Because of your position as a leader in Department of Defense (DoD) pharmacy, you have been invited as a participant in an exciting research study. The research entitled "Vision 2010: Pharmacy Executive Leadership Skills and Associated Competencies in the Department of Defense," will seek to identify the most critical issues and describe the job skill, knowledge, and ability requirements facing DoD pharmacy executives in the next five to ten years.

2. This study is extremely important to DoD pharmacy because it will identify the critical issues that will challenge future pharmacy leaders. This study will also affect the training and mentoring of junior pharmacists through identification of skills that they must possess to face these challenges. The research results will be shared with all DoD pharmacists in addition to being published in a leading national pharmacy journal.

3. Please take a few minutes to read the enclosed material before participating in the study. Attachment 1 discusses the objectives and methodology of this study. Attachment 2 is the actual Delphi study instrument. Please note that this is not a survey. The Delphi Method is an effective means of assessing the judgments of a group of experts. Confidentiality of your responses will be maintained throughout the study.

4. I appreciate your participation and thank you in advance for sharing you insight for this important research. If there are any questions or if you need further clarification, please contact me at (210) 292-3220 or andrew.meadows@tricaresw.af.mil.

ANDREW B. MEADOWS, Capt, USAF, BSC
Administrative Resident, TRICARE Southwest
U.S. Army-Baylor University Graduate
Program in Healthcare Administration

Vision 2010 Information Paper

Background Information

The role of the pharmacy executive is rapidly changing in response to the changing healthcare environment. Manpower shortages, rising costs, and increasing numbers of complex pharmaceutical products will dramatically alter the future of pharmacy practice in the DoD. To meet these challenges, pharmacy leaders must constantly develop new skills to ensure personal and organizational success in the future.

Objectives

This executive skills project is being conducted in conjunction with the U.S. Army-Baylor University Graduate Program in Healthcare Administration, to identify major future pharmacy executive issues over the next five to ten years. This research will further describe the skill, knowledge, and ability requirements that current experts expect will be required to be successful in a highly technical and rapidly changing environment.

Expert Respondents

Pharmacy officers in the Army, Navy, and Air Force serving in and/or selected for promotion to the grades of O-5 or O-6 were selected as study participants. Collectively, this group represents nearly 100 officers with significant executive experience as well as demonstrated record of excellence in a variety of roles.

How long will it take?

It will take approximately 45-60 minutes of total time, over a one to three month period to respond to two questionnaires. The first iteration will request short answers to a specific question that is posed. The final iteration will require respondents to complete a questionnaire providing numeric ratings of items. At each round, responses should be returned to the investigator within a week in order to remain on schedule.

Methods

This is not a survey! This study employs the Delphi Method to collect and describe the opinions of expert respondents. The RAND Corporation initially developed it as a means of effectively and efficiently gaining expert group judgments. Respondents are not required to travel or complete any advance reading. It has three hallmarks:

1. Expert opinion is gained through the use of an anonymous questionnaire;
2. Interaction among respondents is accomplished at each round by synthesizing all responses, informing each respondent of the group's current position, and redistributing the questionnaire results for further consideration; and
3. The group generally achieves a consensus after a few rounds.

Individual Utility of Results

Through their participation, experts will play a vital role in the determination of new directions for DoD pharmacy executive competencies. Experts should find it an interesting forecast into the future and an opportunity to respond to the collective ideas of the panel. At study completion, each participant will receive a summary report of the results.

How will the results be used?

Compiled results from this study may be used in several ways:

1. Knowledge of these results will better prepare current pharmacy leaders in their task of mentoring junior pharmacy officers;
2. Future pharmacy leaders may identify their personal strength and weakness areas in order to plan their own self-improvement;
3. Military education and training courses can be modified to more fully address the requisite skills, knowledge, and abilities require by future executives;
4. Using these findings, comparisons can be made between pharmacy executive skills and those results reported for other professions; and
5. The results will be published in a prestigious professional journal to add to the stream of research in this area.

Instructions:

First – Specifically, list what you personally consider the TOP FIVE issues or problems that DoD pharmacy leaders will encounter in the next five to ten years. Define the issues or problems as clearly as possible, making sure to avoid generalized or categorical terms.

Second – For each identified issue or problem, list what you consider to be the requisite skills, knowledge, or abilities that will be needed to deal with each of the executive issues or problems.

Finally – Return your responses to the following e-mail address:

andrew.meadows@tricaresw.af.mil

Thank you for your time and cooperation.

Pharmacy Executive Issue or Problem	**Skills, Knowledge, or Abilites**
Example: Management of vendor contracts	Negotiating, interpersonal relations, communication, computing, forecasting, cost analysis
1.	
2.	
3.	
4.	
5.	

Appendix B

13 November 2001

MEMORANDUM FOR DoD PHARMACY EXECUTIVES

FROM: Captain Andrew B. Meadows

SUBJECT: Vision 2010: Pharmacy Executive Leadership Skills – Initiation of Phase II

1. Because of your position as a leader in Department of Defense (DoD) pharmacy, you have been invited as a participant in an exciting research study. The research entitled "Vision 2010: Pharmacy Executive Leadership Skills and Associated Competencies in the Department of Defense," seeks to identify the most critical issues and describe the job skill, knowledge, and ability requirements facing DoD pharmacy executives in the next five to ten years.

2. This study uses the Delphi Method. The Delphi Method is an effective means of assessing the judgments of a group of experts. Phase I of the study was sent out in Aug-Sept and the response rate was 44 percent. An expert panel (COL Heath, Col Meier, & CAPT Welter) then analyzed and categorized all of the responses. Phase II of the study gives respondents the opportunity to rate competency items that were generated from Phase I. Please be assured that confidentiality of your responses will be maintained throughout the study.

3. Return options for the Phase II instrument are as follows:

a. Electronic Mail
   Please highlight, bold, or underline rating responses.
   Send to: andrew.meadows@tricaresw.af.mil

b. Regular Mail
   Capt Andy Meadows
   TRICARE Southwest
   7800 IH-10 West, Suite 400
   San Antonio, TX 78230-4750

c. Fax
   Commercial (210) 292-3222 or DSN 554-3222
   Use cover sheet – attention Capt Meadows
   Notify of transmission via e-mail or phone

4. Please contact me at (210) 292-3220 (comm) or 554-3220 (DSN) if you have questions.

ANDREW B. MEADOWS, Capt, USAF, BSC
Administrative Resident, TRICARE Southwest
U.S. Army-Baylor University Graduate
Program in Healthcare Administration

Vision 2010: Pharmacy Executive Leadership Skills and Associated Competencies in the Department of Defense

Phase II Questionnaire

Respondent Background Information

Please take a minute to complete the following items.
Fill in the blanks or mark as appropriate. Thank you!

Demographics:

Age:_____years Gender: Male _____ Female _____ Service: Army _____ Navy _____ Air Force _____

Job Title/Position:_____

Education: (check all that apply)

Undergraduate

Bachelor of Science _____

Doctor of Pharmacy _____

Master's

Pharmacy related field _____

Non-pharmacy related field _____

Doctorate (Ph.D.)

Pharmacy related field _____

Non-pharmacy related field _____

Other: (please list) _____

Experience:

Experience as a pharmacist: _____ years

Experience as a military pharmacist: _____ years

Use this space for any additional comments you may want to share

1. Human Resource Domain

Human Resource Issues from Phase 1 (Frequency that issue was raised during Phase 1 is shown in parenthesis)			
Recruiting/Retention	(14)	Advanced Training	(2)
Staffing/Manpower	(12)	Continuing Education	(1)
Pharmacist Shortage	(8)	Competency	(1)
Personnel Management	(8)	Assignment System	(1)
Mentoring	(4)	Job Frustration/Burn Out	(1)
Pay/Compensation	(4)	Military vs. Civilian Staff	(1)
Career Progression	(4)		

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Knowledge of guidelines for supervision of federal workers	1	2	3	4	5	6	7
2. Ability to manage time effectively and efficiently	1	2	3	4	5	6	7
3. Skills in clearly defining job duties and descriptions	1	2	3	4	5	6	7
4. Ability to build positive interpersonal relationships	1	2	3	4	5	6	7
5. Ability to fully utilize support staff employees	1	2	3	4	5	6	7
6. Skills in building relationships with colleges of pharmacy	1	2	3	4	5	6	7
7. Ability to “sell” candidates on military pharmacy career	1	2	3	4	5	6	7
8. Knowledge of issues present in civilian job market	1	2	3	4	5	6	7
9. Ability to effectively manage military career	1	2	3	4	5	6	7
10. Skills in building a positive work environment for staff	1	2	3	4	5	6	7
11. Ability to explore new roles for pharmacy staff members	1	2	3	4	5	6	7
12. Skills in building effective training programs for staff	1	2	3	4	5	6	7
13. Skills in communicating with all possible stakeholders	1	2	3	4	5	6	7
14. Ability to manage personal and staff member stress	1	2	3	4	5	6	7
15. Skills in mentoring junior staff members in achieving goals	1	2	3	4	5	6	7

2. Pharmacy Operations / Business Practices Domain

Pharmacy Operations / Business Practices Issues from Phase 1 (Frequency that issue was raised during Phase 1 is shown in parenthesis)			
Operational/Process Management	(6)	Regulatory Oversight	(2)
Application of Business Principles	(4)	Vendor Contracts	(2)
Medication Errors/Safety/Quality	(5)	Changing Pharmacy Practice Model	(1)
Customer Service/Patient Education	(3)	Workload	(1)
Refill Management	(3)	Product Shortages	(1)

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Knowledge of pharmacy workflow design issues	1	2	3	4	5	6	7
2. Understanding of service's pharmacy staffing model	1	2	3	4	5	6	7
3. Ability to report and interpret performance metrics	1	2	3	4	5	6	7
4. Ability to oversee and manage contractor performance	1	2	3	4	5	6	7
5. Knowledge of legal and regulatory standards	1	2	3	4	5	6	7
6. Ability to utilize continuous quality improvement techniques	1	2	3	4	5	6	7
7. Ability to respond to national drug shortages	1	2	3	4	5	6	7
8. Ability to identify risks and implement corrective action	1	2	3	4	5	6	7
9. Skills in process management and standardization	1	2	3	4	5	6	7
10. Knowledge of facility planning for efficient operations	1	2	3	4	5	6	7

3. Information Management & Technology Domain

Information Management & Technology Issues from Phase 1 (Frequency that issue was raised during Phase 1 is shown in parenthesis)			
Automation	(12)	Information Management	(4)
Clinical Information Systems	(5)	Computer Skills	(1)
New Technology	(4)		

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Knowledge of the variety of automated dispensing systems	1	2	3	4	5	6	7
2. Skills in using basic computer software (Word, Excel, etc)	1	2	3	4	5	6	7
3. Understanding of information systems architecture	1	2	3	4	5	6	7
4. Knowledge of data security issues	1	2	3	4	5	6	7
5. Ability to evaluate various automated dispensing systems	1	2	3	4	5	6	7
6. Skills in computer programming	1	2	3	4	5	6	7
7. Ability to effectively manage large quantities of data	1	2	3	4	5	6	7
8. Knowledge of basic issues related to computer hardware	1	2	3	4	5	6	7
9. Ability to effectively use the CHCS computer system	1	2	3	4	5	6	7
10. Ability to optimize the use of automated dispensing systems	1	2	3	4	5	6	7

4. Financial Resources Domain

Financial Resource Issues from Phase 1 (Frequency that issue was raised during Phase 1 is shown in parenthesis)			
Budget/Funding	(11)	Ambulatory Care Services	(1)
Limited Resources	(3)	Resource Management	(1)
Financial Management	(3)	Business Case Analysis	(1)
Facility Management	(2)		

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Ability to accurately forecast costs, workload, and inflation	1	2	3	4	5	6	7
2. Skills in basic financial management	1	2	3	4	5	6	7
3. Ability to recognize and respond to trends	1	2	3	4	5	6	7
4. Knowledge of the third party billing process	1	2	3	4	5	6	7
5. Ability to develop and adhere to a budget	1	2	3	4	5	6	7
6. Skills in recognizing/responding to cost saving opportunities	1	2	3	4	5	6	7
7. Skills in conducting a business case analysis	1	2	3	4	5	6	7
8. Ability to analyze costs	1	2	3	4	5	6	7
9. Knowledge of the DoD procurement and acquisition process	1	2	3	4	5	6	7
10. Knowledge of the DoD budgeting process	1	2	3	4	5	6	7

5. Formulary Management Domain

Formulary Management Issues from Phase 1 (Frequency that issue was raised in Phase 1 is shown in parenthesis)			
Formulary Management	(8)	Keeping Pace with New Drugs	(1)
Biotechnology/Human Genome	(4)	Maintaining Robust Formularies	(1)
Special Purchase Process	(1)	Recapture of Network Workload	(1)
Increasing Demand for Products	(1)	Drug Cost	(1)

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Knowledge of pharmacoeconomics	1	2	3	4	5	6	7
2. Ability to negotiate with vendors and contractors	1	2	3	4	5	6	7
3. Ability to build strong relations with medical staffs	1	2	3	4	5	6	7
4. Ability to build strong relations with executive staffs	1	2	3	4	5	6	7
5. Understand the implications of gene therapy	1	2	3	4	5	6	7
6. Knowledge of the FDA's drug approval process	1	2	3	4	5	6	7
7. Ability to effectively and efficiently manage P&T meetings	1	2	3	4	5	6	7
8. Ability to critically review the medical literature	1	2	3	4	5	6	7
9. Knowledge of managed care initiatives	1	2	3	4	5	6	7
10. Knowledge of ethical issues related to biotech/gene therapy	1	2	3	4	5	6	7

6. Drug Therapy Management Domain

Drug Therapy Management Issues from Phase 1 (Frequency that issue was raised in Phase 1 is shown in parenthesis)			
Clinical Pharmacy Services	(6)	Disease State Mgmt/CPG's	(2)
Acquisition of Clinical Skills	(5)	Investigational New Drugs	(1)
Pharmacists' Role as Providers	(3)	Outcome Documentation	(1)

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Ability to speak with physicians and other providers	1	2	3	4	5	6	7
2. Skills in both writing and verbal communication	1	2	3	4	5	6	7
3. Ability to actively listen	1	2	3	4	5	6	7
4. Ability to "sell" your clinical pharmacy services	1	2	3	4	5	6	7
5. Skills in designing, conducting, and interpreting research	1	2	3	4	5	6	7
6. Ability to assess patients and devise treatment plans	1	2	3	4	5	6	7
7. Knowledge of therapeutics	1	2	3	4	5	6	7
8. Understanding of the privileging and credentialing process	1	2	3	4	5	6	7
9. Skills in building patient care teams	1	2	3	4	5	6	7
10. Ability to collaborate with other disciplines in patient care	1	2	3	4	5	6	7

7. Pharmacy Benefit Management Domain

Pharmacy Benefit Management Issues from Phase 1 (Frequency that issue was raised in Phase 1 is shown in parenthesis)			
Uniform DoD Pharmacy Benefit	(10)	DoD/VA Joint Contracting	(1)
Pharmacy Benefit Management	(3)	Public Relations	(1)
Implementing Best Practices	(1)	Access to Care	(1)

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Knowledge of DoD policies and directives	1	2	3	4	5	6	7
2. Ability to balance cost versus incremental benefit	1	2	3	4	5	6	7
3. Knowledge of statistics	1	2	3	4	5	6	7
4. Understand Managed Care Support Contract language	1	2	3	4	5	6	7
5. Ability to effectively use expert consultants	1	2	3	4	5	6	7
6. Knowledge of the role/function of Health Affairs & TMA	1	2	3	4	5	6	7
7. Ability to use basic business skills in pharmacy environment	1	2	3	4	5	6	7
8. Knowledge of commercial best practices	1	2	3	4	5	6	7
9. Ability to market pharmacy services to eligible beneficiaries	1	2	3	4	5	6	7
10. Knowledge of public health needs and issues	1	2	3	4	5	6	7

8. Leadership Domain

Leadership Issues from Phase 1 (Frequency that issue was raised in Phase 1 is shown in parenthesis)			
Future Role of Pharmacy	(4)	Learn from Mistakes	(1)
Leadership	(3)	Change Management	(1)
Readiness Mission	(2)	Work Environment	(1)
Strategic Planning	(1)		

Skills, Knowledge, and Abilities Rating Scale

Directions - Please rate all of the following skills, knowledge, and abilities according to the importance that should be placed on them in dealing with types of issues listed above. Indicate your answers by marking the appropriate number.

	Unimportant			---			Extremely Important
1. Ability to identify and improve critical processes	1	2	3	4	5	6	7
2. Knowledge of group dynamics and organizational behavior	1	2	3	4	5	6	7
3. Ability to accept constructive criticism	1	2	3	4	5	6	7
4. Skills in motivating staff members	1	2	3	4	5	6	7
5. Ability to see the big picture	1	2	3	4	5	6	7

Thank you very much for your time and cooperation!!

Return Options:

1. Electronic Mail
   Please highlight, bold, or underline rating responses.
   Send to: andrew.meadows@tricaresw.af.mil

2. Regular Mail
   Capt Andy Meadows
   TRICARE Southwest
   7800 IH-10 West, Suite 400
   San Antonio, TX 78230-4750

3. Fax
   Commercial (210) 292-3222 or DSN 554-3222
   Use cover sheet – attention Capt Meadows
   Notify of transmission via e-mail or phone

Please contact me at (210) 292-3220 (comm) or 554-3220 (DSN) for any questions.

Table 1

Key Phrase Issue Frequencies Grouped by Domain Categories

Domain	Unique Issues		Issues Identified	Response Frequency	
	n	Percent		n	Percent
Human Resources	13	20.97		61	30.05
			Recruiting / Retention	14	
			Staffing / Manpower	12	
			Pharmacist Shortage	8	
			Personnel Management	8	
			Mentoring	4	
			Pay / Compensation	4	
			Career Progression	4	
			Advanced Training	2	
			Continuing Education	1	
			Competency	1	
			Assignment System	1	
			Job Frustration / Burn Out	1	
			Military vs. Civilian Staff	1	
Pharmacy Operations / Business Practices	10	16.13		28	13.79
			Operational / Process Management	6	
			Medication Errors / Safety / Quality	5	
			Application of Business Principles	4	
			Customer Service / Patient Education	3	
			Refill Management	3	
			Regulatory Oversight	2	
			Vendor Contracts	1	

table continues

Table 1 (continued)

Key Phrase Issue Frequencies Grouped by Domain Categories

Domain	Unique Issues		Issues Identified	Response Frequency	
	n	Percent		n	Percent
			Changing Pharmacy Practice Model	1	
			Workload	1	
			Product Shortages	1	
Information Management and Technology	5	8.06		26	12.81
			Automation	12	
			Clinical Information Systems	5	
			New Technology	4	
			Information Management	4	
			Computer Skills	1	
Financial Resources	7	11.29		22	10.84
			Budgeting / Funding	11	
			Limited Resources	3	
			Financial Management	3	
			Facility Management	2	
			Ambulatory Care Services	1	
			Resource Management	1	
			Business Case Analysis	1	
Formulary Management	8	12.90		18	8.87
			Formulary Management	8	
			Biotechnology / Human Genome	4	
			Special Purchase Process	1	
			Increasing Demand for Products	1	

table continues

Table 1 (continued)

Key Phrase Issue Frequencies Grouped by Domain Categories

Domain	Unique Issues		Issues Identified	Response Frequency	
	n	Percent		n	Percent
			Keeping Pace with New Drugs	1	
			Maintaining Robust Formularies	1	
			Recapture of Network Workload	1	
			Drug Cost	1	
Drug Therapy Management	6	9.68		18	8.87
			Clinical Pharmacy Services	6	
			Acquisition of Clinical Skills	5	
			Pharmacists' Role as Providers	3	
			Disease State Management / CPG's	2	
			Investigational New Drugs	1	
			Outcome Documentation	1	
Pharmacy Benefit Management	6	9.68		17	8.37
			Uniform DoD Pharmacy Benefit	10	
			Pharmacy Benefit Management	3	
			Implementing Best Practices	1	
			DoD / VA Joint Contracting	1	
			Public Relations	1	
			Access to Care	1	
Leadership	7	11.29		13	6.40
			Future Role of Pharmacy	4	
			Leadership	3	
			Readiness Mission	2	

table continues

Table 1 (continued)

Key Phrase Issue Frequencies Grouped by Domain Categories

Domain	Unique Issues		Issues Identified	Response Frequency	
	n	Percent		n	Percent
			Strategic Planning	1	
			Learn from Mistakes	1	
			Change Management	1	
			Work Environment	1	
Totals	62	100.00		203	100.00

Table 2

Demographic Data for Pharmacy Executive Respondents

Variable	Mean	SD	n	Percent
Age (years)	46.30	3.91		
Experience				
Years as Pharmacist	21.42	4.18		
Years as DoD Pharmacist	18.00	3.97		
Gender				
Male			39	90.70
Female			4	9.30
Service Affiliation				
Air Force			23	53.49
Army			13	30.23
Navy			7	16.28
Duty Position				
Director of Pharmacy Services			23	53.49
Staff Officer			11	25.58
Commander			5	11.63
Other			4	9.30
Degree Obtained				
Bachelors (BS in Pharmacy)			43	100.00
Doctor of Pharmacy (Pharm.D.)			18	41.86
Masters (MS in Pharmacy)			7	16.28
Masters (MS, MHA, MBA, etc)			25	58.14
Doctorate (PhD)			3	6.98
Other			5	11.63

Table 3

SKA Rating Reliabilities by Domain

Domain	SKA Items Rated	Percent of SKA Items	Cronbach's Alpha
Human Resources	15	18.75	.82
Pharmacy Operations/Business Practices	10	12.50	.71
Information Management and Technology	10	12.50	.76
Financial Resources	10	12.50	.75
Formulary Management	10	12.50	.78
Drug Therapy Management	10	12.50	.86
Pharmacy Benefit Management	10	12.50	.84
Leadership	5	6.25	.71
Total	80	100.00	

Note: All Cronbach's alpha coefficients exceed an acceptable value of .70, and represent stable internally consistent measurements of the means for the items within domains (Nunnally, 1978).

Table 4

Descriptive Statistics for the Top Three Rated SKAs in Each Domain

Domain	SKA Item	Mean	SD
Human Resources	Skills in building a positive work environment for staff	6.49	0.74
	Ability to manage time effectively and efficiently	6.16	0.90
	Skills in mentoring junior staff members in achieving goals	6.12	0.79
Pharmacy Operations /	Ability to identify risks and implement corrective action	6.30	0.74
Business Practices	Knowledge of legal and regulatory standards	6.12	0.93
	Ability to report and interpret performance metrics	5.86	0.91
Information Management and	Skills in using basic computer software (Word, Excel, etc)	6.07	1.01
Technology	Ability to optimize the use of automated dispensing systems	6.02	0.86
	Ability to effectively use the CHCS computer system	5.93	1.08
Financial Resources	Ability to accurately forecast costs, workload, and inflation	6.28	0.63
	Ability to recognize and respond to trends	6.14	0.60
	Skills in recognizing/responding to cost saving opportunities	6.12	0.79
Formulary Management	Ability to build strong relations with medical staffs	6.65	0.61
	Ability to build strong relations with executive staffs	6.60	0.58
	Ability to effectively and efficiently manage P&T meetings	6.49	0.67
Drug Therapy Management	Skills in both writing and verbal communication	6.63	0.54
	Ability to actively listen	6.56	0.55
	Ability to speak with physicians and other providers	6.51	0.67
Pharmacy Benefit Management	Knowledge of DoD policies and directives	6.37	0.85
	Ability to use basic business skills in pharmacy environment	6.16	0.87
	Knowledge of commercial best practices	5.91	1.00
Leadership	Ability to see the big picture	6.70	0.56
	Skills in motivating staff members	6.47	0.74
	Ability to identify and improve critical processes	6.30	0.80

Table 5

Descriptive Statistics for the Top Fifteen Rated SKAs

SKA Item	Domain	Mean	SD
Ability to see the big picture	Leadership	6.70	0.56
Ability to build strong relations with medical staffs	Formulary Management	6.65	0.61
Skills in both writing and verbal communication	Drug Therapy Management	6.63	0.54
Ability to build strong relations with executive staffs	Formulary Management	6.60	0.58
Ability to actively listen	Drug Therapy Management	6.56	0.55
Ability to speak with physicians and other providers	Drug Therapy Management	6.51	0.67
Ability to effectively and efficiently manage P&T meetings	Formulary Management	6.49	0.67
Skills in building a positive work environment for staff	Human Resources	6.49	0.74
Skills in motivating staff members	Leadership	6.47	0.74
Ability to collaborate with other disciplines in patient care	Drug Therapy Management	6.37	0.69
Knowledge of DoD policies and directives	Pharmacy Benefit Management	6.37	0.85
Ability to identify risks and implement corrective action	Pharmacy Operations / Business Practices	6.30	0.74
Ability to identify and improve critical processes	Leadership	6.30	0.80
Ability to accurately forecast costs, workload, and inflation	Financial Resources	6.28	0.63
Ability to “sell” your clinical pharmacy services	Drug Therapy Management	6.26	0.82

Table 6

Descriptive Statistics for the Bottom Ten Rated SKAs

SKA Item	Domain	Mean	SD
Understand Managed Care Support Contract language	Pharmacy Benefit Management	4.91	1.17
Skills in building relationships with colleges of pharmacy	Human Resources	4.91	1.41
Knowledge of the third party billing process	Financial Resources	4.63	1.22
Understanding of information systems architecture	Information Management and Technology	4.60	1.24
Skills in designing, conducting, and interpreting research	Drug Therapy Management	4.49	1.33
Knowledge of ethical issues related to biotech/gene therapy	Formulary Management	4.28	1.55
Knowledge of the FDA's drug approval process	Formulary Management	4.12	1.37
Ability to fully utilize support staff employees	Human Resources	4.05	1.21
Understand the implications of gene therapy	Formulary Management	3.88	1.24
Skills in computer programming	Information Management and Technology	3.35	1.65